

Abstract

Optical devices using reflective polarizers and, in particular, diffusely reflective polarizers are provided. Many of the optical devices utilize the diffusely reflecting and specularly transmitting properties of diffusely reflecting polarizers to enhance their optical characteristics. The optical devices include a lighting system which uses a reflector formed from a diffusely reflecting polarizer attached to a specular reflector. Another optical device is a display apparatus which uses a diffusely reflecting polarizer layer in combination with a turning lens which folds shallow angle light toward a light modulating layer. Other optical devices exploit the depolarizing characteristics of a diffusely reflecting polarizer when reflecting light. Still other optical devices use diffusely reflecting polarizers to recycle light and improve display illumination.